

Amendments to the Specification

On Page 1, please replace the first full paragraph with the following rewritten paragraph:

The invention relates to a roller arrangement for a stowing roller conveyor ~~as defined in the introductory parts of claims 1 and 28~~, as well as to a stowing roller conveyor ~~as defined in the introductory part of claim 34~~.

On Page 4, please replace the second full paragraph with the following rewritten paragraph:

The problem of the invention is resolved by ~~the features specified in the characterizing clause of claim 1~~ a roller arrangement for conveying piece goods along a stowing roller conveyor in accordance with the invention. Surprisingly, benefits are obtained in this connection in that a self-adjusting setting device depending on the load moment is arranged between the conveying roller and a first component of the clutch, via which such first clutch component can be pressed against the other clutch component with a force of contact pressure exceeding the low spring force, with self-adjustment to the minimum weight of the piece goods to be transported. This permits slip-free engagement between the clutch components, or the transmission of driving torque from the driving roller to the conveying roller even when transporting piece goods with highly varying weights, on the one hand, and keeping the shifting force required for

uncoupling one of the clutch components low, on the other hand. Arranging the clutch device and the load-dependent setting device within and between the driving and conveying rollers, is advantageous as well in that said rollers are protected in this way from external influences such as fouling over their entire useful life, and, furthermore, permits superior utilization of the interior space available in the driving and conveying rollers, to begin with.

On Page 4, please replace the third full paragraph with the following rewritten paragraph:

~~The A preferred embodiment according to claim 2~~ permits a small structural design of the roller arrangement, and reliable actuation of the clutch system.

On Page 5, please replace the first full paragraph with the following rewritten paragraph:

~~The Another embodiment according to claim 3~~ is beneficial in that the force of contact pressure is infinitely variable in a simple manner within the limits of minimum and maximum weight values of the piece goods, depending on the weight of the piece goods to be conveyed. Furthermore, it is advantageous in that at least one of the transmitting elements is automatically adjusted without requiring external energy, and thus without any drive, to an extent depending on the weight of the piece goods; in that an

equilibrium is adjusted between the driving torque of the driving and conveying rollers; and in that the drive torque is transmitted from the driving to the conveying roller free of any slip. Owing to such self-readjusting effect of the setting device, wear of the clutch device caused by friction can be substantially reduced, and the service or useful life of the clutch can be prolonged.

On Page 5, please replace the second full paragraph with the following rewritten paragraph:

~~The~~ A further embodiment ~~according to claim 4~~ is advantageous in that transmission elements of the setting device, such elements being arranged one in the other and adjustable in relation to each other, are inserted in the standard-type conveying roller, which permits realizing a simple structure of the setting device.

On Page 5, please replace the third full paragraph with the following rewritten paragraph:

With ~~the~~ a further embodiment ~~according to claim 5~~, it is possible to manufacture the transmission elements in a simple manner, for example by employing the injection molding process.

On Page 5, please replace the fourth full paragraph with the following rewritten paragraph:

According to ~~claim 6~~ a further embodiment, the number of individual components is reduced further, and a compact design is obtained.

On Page 5, please replace the fifth full paragraph with the following rewritten paragraph:

~~An~~ In a further possible embodiment ~~according to claim 7 is possible as well~~, and the modular structure of the setting and clutch devices permits simple exchangeability of individual components of the construction. In this connection, the first clutch component is axially displaceably supported on the roller axle and/or rotationally supported on said axle in the peripheral direction.

On Pages 5-6, please replace the paragraph bridging pages 5-6 with the following rewritten paragraph:

~~The~~ A further embodiment ~~according to claim 8~~ permits the force of contact pressure exerted by the first clutch component to automatically readjust itself vis-à-vis the other clutch component, on the one hand, and/or, on the other hand, if an adjustable maximum value of the transmittable torque between the

transmission elements is exceeded, e.g. when conveying piece goods with impermissible weights, permits to transmit to the transmitting element and the first clutch component the overload moment via the engaged transmitting elements free of any destructive effects. In any such case, the setting device comprising at least two transmitting elements, forms a safety clutch.

On Page 6, please replace the first full paragraph with the following rewritten paragraph:

~~The Other~~ embodiments ~~according to claims 9 and 10~~, however, are beneficial as well in that it is possible with such embodiments to adjust the variable force of contact pressure, which is self-adjusting to the weight of the piece goods to be transported, via a helical set of gears that can be produced in a simple manner.

On Page 6, please replace the second full paragraph with the following rewritten paragraph:

According to ~~the~~ beneficial further ~~developments~~ embodiments of the invention ~~according to claims 11 and 12~~, a simple manufacture of the transmission elements is achieved with longitudinal grooves and/or tooth elements, which are adapted to complement one another.

On Page 6, please replace the third full paragraph with the following rewritten paragraph:

By virtue of ~~the further developments~~ embodiments of the invention ~~according to claims 13 to 15~~, it is possible to optimally adjust the transformation of the force ratio between a load-dependent tangential force of the piece goods, and the force of contact pressure acting between the two components of the clutch.

On Page 6, please replace the fourth full paragraph with the following rewritten paragraph:

It is assured according to ~~claim 16~~ a further embodiment that the adjustable transmitting elements, which are guided one in the other in the way of a screw line, are connected with each other in terms of movement both in their engaged and disengaged switching positions, and particularly connected with each other in a movingly fixed manner, and are capable of reacting within a short time to torque variations caused by transported piece goods with varying weights.

On Page 6, please replace the fifth full paragraph with the following rewritten paragraph:

The design according to ~~claim 17~~ a further embodiment contributes to the rugged structure of the roller arrangement.

On Page 6, please replace the sixth full paragraph with the following rewritten paragraph:

~~The~~ A further ~~development~~ embodiment of the invention ~~according to claim 18~~ permits the spring element to be accommodated in a space-saving manner, and to centrally transmit the force component and the axial force adjusted to the weight of the piece goods, to the first clutch component, which allows avoiding wear conditioned by friction due to any one-sided engagement between the coupling or friction surfaces of the two components of the clutch.

On Page 7, please replace the first full paragraph with the following rewritten paragraph:

However, ~~the~~ another embodiment ~~according to claims 19 and 21~~ is beneficial as well in that, for example the adjustable first transmitting element has a brake extension which, when the first clutch component is set from its shifting position in which it is engaged, to the one in which it is disengaged, engages a braking block fixed on the roller axle, so that the piece goods, which are supported on the roller arrangement to some extent, are quickly slowed down when conveyed at high rates of advancement, and any impact between two pieces of goods can be kept to a minor extent, if piece goods transported one after the other in tight succession, are backing up, so that damage to the piece goods can

be avoided. It is beneficial, furthermore, that the brake extension serves at the same time as a guide for the at least one spring element, particularly the cylindrical pressure spring.

On Page 7, please replace the second full paragraph with the following rewritten paragraph:

~~The~~ A further embodiment ~~according to claim 22~~ contributes to the robustness of the construction of the roller arrangement.

On Page 7, please replace the third full paragraph with the following rewritten paragraph:

According to ~~the~~ a further embodiment ~~defined in claims 23 and 24~~, an optimal opening angle is found for the surfaces of the clutch complementing and engaging each other.

On Page 7, please replace the fourth full paragraph with the following rewritten paragraph:

Further ~~developments~~ embodiments of the invention ~~as defined in claims 25 to 27~~ are beneficial as well in that the force of contact pressure between the two clutch components depending on the weight of the piece goods to be transported, is automatically adjusted via the setting device until slip-free frictional grip has been set. Furthermore, the setting device is characterized by

its small structural size, so that it can be accommodated in the conveying roller, which preferably has a standard diameter, for example of 50 mm.

On Page 7, please replace the fifth full paragraph with the following rewritten paragraph:

The problem of the invention, however, is solved also by the features ~~specified in the characterizing clause of claim 28~~ discussed below. The surprising advantage gained is that owing to integration of the coupling components of the clutch system in the driving and/or conveying rollers, the shifting distance for shifting at least one clutch component versus the other clutch components, from a position in which it is disengaged, to one in which it is engaged, can be kept short, and high reliability of the function of the clutch system is achieved by keeping dirt away from it.

On Pages 7-8, please replace the paragraph bridging pages 7-8 with the following rewritten paragraph:

~~The~~ A further embodiment ~~according to claim 29~~ is beneficial in that the shifting force of the setting device is directly transmitted by a shifting lever to a setting lever rotationally supporting the transmitting roller, which further reduces the adjusting distance.

On Page 8, please replace the first full paragraph with the following rewritten paragraph:

~~The Further embodiments according to claims 30 to 32~~ are found to be advantageous in that the driving torque can be transmitted without slip from the driving roller to the conveying roller even if the force of contact pressure exerted by the transmitting roller on the coupling surfaces of the driving and conveying rollers is low.

On Page 8, please replace the second full paragraph with the following rewritten paragraph:

~~The A further embodiment according to claim 33~~ is beneficial in that the transmitting roller can be set from the shifting position engaging it, to one in which it is disengaged, even at small angles of swivel, which allows for short shifting times.

On Page 8, please replace the third full paragraph with the following rewritten paragraph:

Finally, the problem of the invention is resolved also by ~~the features specified in the characterizing clause of claim 34~~ a stowing roller conveyor in accordance with the invention. The benefit surprisingly gained is that the roller arrangement applicable with the aforementioned advantages, contributes to a simple structure of the stowing roller arrangement, and

substantially reduces the force required for shifting the clutch system, permitting in turn smaller dimensions of the setting device initiating the shifting force.